

REMARKS

Please reconsider the application in view of the foregoing amendments and the following remarks.

Status of Claims

Claims 1-3, 5 and 7 are pending in the present application. Claims 2 and 5 have been withdrawn from consideration. Claim 1 is herein amended. Support for this amendment can be found on paragraphs 0008 to 0009, and paragraphs 0025 to 0026 of the specification. No new matter has been presented.

Claim Rejections - 35 U.S.C. §103(a)

The Examiner has rejected claims 1, 3 and 7 under 35 U.S.C. 103(a) as being obvious over **Bolton et al.** (WO 02/078010 A1) (made of record by applicants in IDS filed 2/6/09; a family member of previously cited Bolton et al.) in view a patent to the “Gesellschaft zur Forderung der Forschung an der Eidgenossischen Technischen Hochschule Zurich”, Switzerland (GB-136902) (made of record by applicants in IDS filed 4/28/08, and henceforth referred to as “ETH”), in view of **Applicant's Admitted Prior Art**, relying on their description of the “Background Art” (specification, paragraph [0002] on page 1).

Applicants have amended claim 1 to further define the claimed features.

Independent Claim 1

i) In the gas turbine plant, during a rated load operation, a flow volume of the coolant flowing through the bypass pathway is controlled by controlling the bypass valve so as to make the rotating speeds of the first gas turbine and the second gas turbine fall within a range of a predetermined rotating speed; and the predetermined range of rotating speed does not include a range of rotating speed at which rotating blades provided to the first and second compressors and to the first and second gas turbines resonate. D1 (Bolton et al. US PAP 2004/0042579), D2 (ETH, GB-1360902) and APA does not disclose the above claimed features.

In the claimed invention, since the rotating speeds of the first gas turbine and the second gas turbine are set to be the above predetermined range, the resonance of the rotating blades provided to the first and second compressors and to the first and second gas turbines can be prevented, thereby blade breakage does not occur. That is, in the claimed gas turbine plant, each gas turbine can be controlled safely during the rated load operation.

ii) In the claimed gas turbine plant, as described in paragraphs 0030 to 0031 in the present specification, two values measured by a first and a second speed indicators from a first and second gas turbines are processed by one bypass control section.

The examiner describes that D2 (ETH, GB-1360902) includes claimed first and second speed indicators and a bypass control section. However, D2 (ETH, GB-1360902) does not disclose that two values measured by speed indicators are processed by one bypass control section, thereby the speed indicators and the bypass control section of D2 is not the claimed first

and second speed indicators and the claimed bypass control section. In D2, the internal pressure of a gas turbine plant is controlled by a control mean 18, the rotating speed of gas turbine 62 is controlled by a control mean 211, and the rotating speed of gas turbine 61 is controlled by a control mean 212. Furthermore, in terms of control means 18 and 211 controlling a valve 161, which the Examiner recites, the control mean 211 is worked by a pressure gauge 17 when the control means 18 cannot be used (D2, Page 5, col 1, lines 53 to 65). That is, the control mean 211 and the control means 18 separately control the valve 161. Therefore, the above features of the claimed invention are not obvious over D2.

iii) The claimed feature that the bypass control section is only one is supported by paragraphs 0023 to 0027 and Fig 2 of the present specification. According to Fig 2, the bypass control section 14 receives the rotating speeds of the first gas turbine 2 and the second gas turbine 3 via the speed indicator 12 and 13. Furthermore, paragraphs 0023 to 0027 of the present specification disclose operations of the bypass control section 14.

Also, on page 3 of the Office Action, the Office has conceded that Bolton does not teach the limitations on first speed indicator, second speed indicator and bypass control section as newly recited. Nonetheless, the Office argues that ETH remedies this deficit.

Applicants submit that the ETH reference does not teach or disclose the bypass control section structure of claim 1. Claim 1 recites as follows:

- (1) *a bypass control section for controlling a lift of a bypass valve provided to a bypass pathway that allows the coolant to bypass the third gas turbine.*
- (2) *the bypass control section controlling the lift of the bypass valve based on the rotating speed of the first gas turbine measured by the first speed indicator and the rotating speed of the second gas turbine measured by the second speed indicator (underline added for Emphasis).*

The Examiner argues that because ETH discloses a first speed indicator (sensing element 201) to measure the rotating speed of the shaft connected to gas turbine 62 and a control means 211 that controls a valve 161 of bypass 141 to bypass the gas turbine 62, and a second speed indicator (sensing element 202) to measure the rotating speed of the shaft connected to high pressure gas turbine 61 and a control means 212 that controls a valve 162 of bypass 142 to bypass the high pressure gas turbine 61, the control means 211 and 212 necessarily read on the bypass control section of claim 1 and are structurally no different.

However, Applicants respectfully submit that the Examiner's has mischaracterized the teachings of ETH for the following reasons:

First, even assuming for argument sake that the Examiner's contention made on page 6, item 3, lines 10-13 of the Office Action -- ... that bypass control section of the claimed invention has not been limited to a single independent structure by the specification ... -- has

merit. Applicants submit that even if the control means 211 and control means 212 of ETH are read together a part of same structure, it would still **NOT** teach the bypass control structure of claim 1. This is because, under this assumption, even though the combined bypass control section (211, 212) receives the rotating speed for the gas turbine 62 via the first speed indicator (sensor 201) and the rotating speed for the high pressure gas turbine 61 via the second speed indicator (sensor 202), the combined bypass control section (211, 212) of ETH does NOT only control the valve 161 of bypass 141 that bypasses the gas turbine 62 when the rotating speed is received from first speed indicator (sensor 201) **BUT** also controls a separate valve 162 of bypass 142 to bypass the high pressure gas turbine 61 when the rotating speed is received from second speed indicator (sensor 202).

In contrast, in the claimed invention, the bypass control section opens the bypass valve (11b) to bypass the third gas turbine (PT 4) in case where the rotating speeds of the HPT 2 and the LPT 3 are below the designed values respectively (see Fig. 2). More specifically, by detecting the rotating speeds of the HPT 2 from the first speed indicator 12 and the LPT 3 from the second speed indicator 13, respectively, the lift of the bypass valve 11b and the flow volume of the helium gas flowing through the bypass pathway (11) can be controlled in order to maintain the rotating speeds of the HPT 2 and the LPT 3 at the designed values. As a result, the rated load operation can be performed with safety and high efficiency (see also paragraphs [0025]-[0026] of the present specification).

Because the combined bypass controller of ETH as discussed above does NOT only control the valve 161 of bypass 141 that bypasses the gas turbine 62 when the rotating speed is received from first speed indicator (sensor 201), but also controls a separate valve 162 of bypass 142 to bypass the high pressure gas turbine 61 when the rotating speed is received from second speed indicator (sensor 202), ETH does not teach or disclose *a bypass control section for controlling a lift of a bypass valve provided to a bypass pathway that allows the coolant to bypass the third gas turbine, the bypass control section controlling the lift of the bypass valve based on the rotating speed of the first gas turbine measured by the first speed indicator and the rotating speed of the second gas turbine measured by the second speed indicator* as in claim 1.

In other words, because the bypass controller structure of ETH does not behave like the bypass control section structure of claim 1, the two structures are necessarily different. Specifically, the Examiner should note the distinction that here the structure is being defined by its function and NOT the function that is inherently produced by the structure.

Also, the Applicant's Admitted Prior Art does not remedy this deficit.

Because the proposed combination of references does not teach all of the claimed elements and limitations in claim 1, Applicants submit that claims 1, 3 and 7 would not have been obvious over these references. Accordingly, Applicants request that the rejection under 35 U.S.C. 103 be withdrawn.

Conclusion

The Claims have been shown to be allowable over the prior art. Applicants believe that this paper is responsive to each and every ground of rejection cited in the Office Action dated July 14, 2010, and respectfully request favorable action in this application. The Examiner is invited to telephone the undersigned, applicants' attorney of record, to facilitate advancement of the present application.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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